FAMILY LYCEUM.

PUBLISHED WEEKLY, AT THE LYCEUM PRESS, No. 3, CORNHILL, BY GEORGE W. LIGHT & Co.

VOL. I. BOSTON, SATURDAY, JULY 27, 1833. No. 50.

FAMILY LYCEUM.

JOSIAH HOLBROOK, EDITOR.

TERMS: Two dollars a year, in advance. Six copies for ten dollars.

EVENING ENTERTAINMENTS.

TENTH EVENING.

On the succeeding evening the children were not backward in reminding their father of his promise to give them some account of the countries and nations of the Western continent.

Mr. Oakley.—As I have never visited these countries myself, I shall have to rely entirely on my reading and the verbal accounts which I have received from travellers. I believe, however, that you will find these to be sufficiently interesting.

Gustavus.—No doubt they will, papa.—You will give us the result of the latest observations, I dare say; and we should hardly be able to find these in books without your directions.

Mr. O.—It is well to have the advantage of recent accounts in learning the character of a country and its inhabitants, but it does not follow that the latest are the most faithful. I shall begin with South America, and will read you a few general remarks on this grand region from a late writer.

South America is, in every respect, one of the most interesting portions of the earth's surface. It embraces every range of temperature, from the most chilling cold to the most intense heat; every degree of moisture, from the flooded fen to the parched sand; every shade of fertility, from fields always gay with flowers and trees laden with fruit, to cold and barren rocks, upon which even the hardiest moss and lichen cannot find nourishment; and every variety of healthiness, from the delightful plain, where the sky is never clouded and every breeze gives life, to the pestilent marsh, where the air is death. In the diversity of its surface, and the value and variety of its productions, both upon the soil and in the mine, it is not less worthy of being known. The ridges of mountains in South America, are the longest which are any where to be found; and the peaks of the most elevated pierce the regions of clouds and storms, and stand in cold and tranquil majesty above the reach of any living thing. The rivers of South America are more magnificent than those of any other part of the world; and their being navigable for vessels of burden to a much greater length, must enhance their value when the country is more thickly inhabited, and completely cultivated, and hasten the period when that shall be the case. The giant streams from the vast ridges of the Andes, are collected from numerous torrents that rush in a succession of cascades, down the sides of the mountains, and then roll their united waters over a comparatively level course, in some instances, of two thousand miles. There are very few lakes in South America, and there is hardly an island worthy of the name; but the want of lakes is, to a very considerable extent, compensated by the rivers. The plants of South America consist of those that require the climate of every region of the globe, though the species be in general different from those of the corresponding genera on the other continent. There are also many kinds, and some entire families of plants peculiar to South America. Of these latter, some are used for medicinal purposes, as the different species of Cinchona or Peruvian bark; and the Balsams of Copaiva, Tolu, and Peru: others again are poisonous, as the manchaneel apple; and some are of great request in the arts, as the nopal, upon which are produced the cochineal insects, of which the dye for the most beautiful crimson and scarlet is made. Of the timber that grows in South America, or on the adjoining islands, some is of the greatest beauty and durability; as the mahogany and rosewood, of which the most costly and beautiful furniture is made; and the plants which yield sugar, cotton, and coffee, are more easily cultivated there than in any other part of the world.—The metals and gems are in great abundance. Gold and especially silver, are more plentiful than any where else, and though the finer species of gems are said not to equal those of Asia, either in hardness or in lustre, they are found in greater abundance. The birds are very numerous, some of them, as the condor, or vulture of the Andes, and the ostrich, are of very large size; and others, such as many of the humming-birds, which are most exquisite in their forms and their colors, do not exceed the dimensions of an ordinary fly. Quadrupeds are not so numerous as in the other continent, neither are the beasts of prey so strong or so fierce as those of Asia and Africa; but of the animals which have been carried there, more especially of the cattle and horses, which run wild in the plains toward the south-east, the increase has been almost beyond credibility.

Gustavus.—Indeed, papa, every thing seems to be upon a grand scale in South America. Are not the people a race of giants?

Mr. O.—It was for a long time believed that the Patagonians who live at the southern extremity of the continent were of very large stature; but the statements on which this belief was founded have been repeatedly contradicted. None of the other nations of South America have ever been represented as unusually large.

Gustavus.—I suppose then the people are warlike—all heroes.

Mr. O.—By no means. None of the nations who possessed the country before it was visited by the Europeans, exhibited any remarkable characteristics of courage or warlike skill in resisting the invaders, with the single exception of the Araucanians, inhabiting a part of Chili; whose successful valor exerted in defence of their independence was celebrated by the Spanish poet Ercilla some centuries since, and who have remained unconquered to the present day. Captain Head mentions a race of Indians who live on the borders of the Pampas of Buenos Ayres, and exhibit an extraordinary degree of cruelty and fierceness in their exterminating wars with the Guachos.

Gustavus.—Who is Captain Head, papa?

Caroline.—And who are the Guachos?

Charles.—And what are the Pampas?

Mr. O.—One at a time, my children.—Captain Head is an English officer lately sent out by one of the mining companies to explore some of the South American mines. He travelled with great rapidity across the Pampas, or the great plains extending from Buenos Ayres to Chili, and his account of his travels is in the highest degree amusing and spirited.

Gustavus.—I should like of all things to hear some of his stories.

Mr. O.—Hear, then, his account of the Guachos, who are a people descended from the Spaniards inhabiting the Pampas.

The Guachos are few in number, compared with the surface over which they are scattered; they do not interest themselves in the projects and politics of the towns, but are contented to reside in the same rude huts of mud in which they are born, and follow the laborious occupation of galloping about upon horseback, in quest of wild cattle and ostriches. The huts are of rude materials—mud walls, and thatched with long grass: the corral, or enclosure, is about half a furlong distant; the putrefying, or rather indurating remains of horses and cattle are strewed about; and there are numbers of hawks, or vultures, attracted to each hut by the scent.

There is but one apartment in the hut, in which are the whole of the inmates, men and women, boys and girls. 'In the summer, the hut is so filled with fleas and bin-chucas (which are bugs as large as black beetles), that the whole family sleep on the ground in front of their dwelling.

The reception of the traveller in winter, though different from this, is also highly interesting. He is then received in the hut.—The beef is roasted on a great iron spit; and, when ready, the end of the spit is stuck into the ground; the family and guests sit round it on the skeletons of horses' heads, handle their long knives, and cut away. The hut is lighted by a feeble lamp, and warmed by a fire of charcoal. On the walls are hung, upon horns, two or three bridles and spurs, and several lassos and balls; on the ground are several dark looking heaps, which cannot be easily distinguished. On sitting down upon them, when tired, Captain Head often heard a child scream under him; at other times a young woman would mildly ask him what he wanted; and, occasionally, up would jump a great dog. Once when he was seated on a horse's head, warming his hands at the charcoal fire, he felt something touch him, and saw two children who had crawled naked from under their poncho,* crouching over it like toads; and at times the cock hopped upon his back to crow. They all, however, get up as soon as it is light.

The education of the Guacho is suited to the circumstances under which he is placed. When a mere infant, he is left to swing from the roof in a bullock's hide; when a year old, he crawls about without clothes; and at that early age, a long sharp knife is often his plaything. As soon as he can walk, he is trained to the use of the lasso, by attempting to catch birds and dogs with one made of twine. At the age of four he is mounted on horseback, and assists in driving the cattle into the enclosure. Even then he is adventurous, and can bring back by force those horses that attempt to escape. As his years increase, he becomes more daring and manly, and spends his time in galloping after the ostrich, the gama, the hare, and the tiger, which he captures by killing or laming, with the *bolas* or balls: and he also assists in catching cattle with the lasso. Fed on beef and water, his constitution is strong; and that which would be ovewhelming fatigue to the soft youth of luxurious society, is to him amusement and pleasure. With all this wildness, freedom, and hardihood of life, the Guacho is not wanting either in kindness or in politeness.

Of the other human inhabitants of this immense country—the Pampas Indians—Captain Head had no opportunity of seeing much; but even the little that he did glean, acquires an interest from the scantiness of our knowledge of them.

The Pampas Indians are a daring and hardy race of men, who have never been conquered, and to whom the great changes of the seasons appear to come with singularly little inconvenience. They are always on horseback, whether under the burning heat of summer, or the pinching cold of winter; and they are at all seasons wholly without clothing. They are formed into tribes, under the command of caciques or chiefs, but they have no fixed habitation—they roam about according as they find pasture. They are a warlike people; and, mounted on their fleet and sure-footed horses, with their spears eighteen feet long, which they can manage with great power and dexterity, they are most formidable.—On foot they are almost powerless, as their habitual riding almost deprives them of the faculty of walking.

When mounted, however, their fleetness is absolutely incredible. When they march for an attack, they collect a troop of horses, and, raising their warcry, set off at a gallop. If the march be long, they change horses several times, and always reserve their best ones to be mounted fresh after they are in sight of the enemy. The horses only are used for riding; but they drive mares along with them to serve as food. Their onset is destructive, and, until their horses are worn out by fatigue, to resist them, is no easy matter.

The war between them and the Guachos is a war of passion and extermination; and no quarter is given on either side.

They have some religious notions: they believe in the existence of good and evil spirits, and in a future state; and when their friends die, they kill some of their best horses at the grave, in order that the departed may have something to ride on in the land to which they have gone.

They occasionally visit the towns, where they exchange the skins which they procure in the chase, for knives, spurs, and strong liquors, of the last of which they are very fond. In their cups, however, they have a knowledge of their own weakness, and a caution which, it were to be wished, could be introduced among people who consider themselves far more civilized. 'The day,' says Captain Head, 'of their arrival (at Mendoza), they generally get drunk; but before they indulge in this amusement, they deliberately deliver up to their cacique their knives, and every other weapon they possess, as they are fully aware that they will quarrel as soon as the wine gets into their heads.—They then drink till they can hardly see, and fight, and scratch, and bite, for the rest of the evening. The following day they devote to the selling of their goods, for they never will part with them on the day on which they intend to get tipsy, as they conceive that, in that state, they would be unable to dispose of them to advantage.

* The poncho is a sort of blanket or cloak with a hole in the middle, through which the wearer thrusts his head. The lasso is a thong of raw hide, with a noose at the end, for catching wild cattle or horses. The balls or *bolas*, three in number, connected in a centre by thongs, form an apparatus for catching ostriches and wild quadrupeds.

Addressed to the Benevolent Society of the Scottsboro' Institute, June 17th, 1833.

As members of this society, we are convened to attend the first anniversary of an institution, established and we hope active in the cause of Benevolence.

It has been remarked that generosity is a marked trait in the character of Georgians; then they need only a guide to direct its overflowing stream in the proper channel.

We are blessed with a hand to guide us—and by the direction of that ever faithful friend, we have with pleasure consented to abolish a practice made universal by custom, though extremely injurious, and have resolved to give for benevolent purposes the money which we formerly expended in trifles.

We have in the subject of our benevolence, an intellect calculated at some future period to honor the society, the seminary with which she is connected, and her country.

Shall we lose one pearl? Shall we be so careless of our country's good, as to cast again into the recesses of the mine the diamond whose beauties we have once seen and admired? Oh no! let us strive to polish and make more lovely those natural charms. We have now forty members; perhaps the smallness of the number may discourage some zealous in the cause; remember that there were only 12 Apostles engaged to extirpate the barbarous zeal of pagans—and now the banner of the Christian religion is unfurled, and extends its benign shadow over nearly all the nations of the world; and reflect that this was all accomplished by perseverance, aided by the power of the Holy Spirit; if we possess the first, may we not hope to obtain the assistance of the latter in so glorious a cause? Exertion on your part only is necessary to its prosperity and consequent usefulness.

It was said of the great Washington, that 'his highest ambition was the happiness of others'; and will not this noble sentiment gain beauty, when proceeding from the heart of a female? Will it not add more lustre to its present brilliancy, when decorating the circle of a woman's virtues?—Then if it will adorn the female, we should strive to have it entwined in our wreaths—for it breathes the genuine benevolence of the soul.

Though we possess not the extensive field for action, which was spread before a Judson or Newell, yet we may like a Lady Huntingdon establish asylums for the suffering poor, and extend the hand of relief to the wretched. 'T is true we have not to suffer the fatigue which Mrs. Graham felt it her duty to sustain. While she with a crust of bread would spend her day in active exertions to search out and relieve objects of charity, we have only in our own abodes to bestow, as the pious widow, our mite; and in addition to the joy we feel in doing good, we receive in return the warm blessings of a grateful heart.

Education is just beaming upon our land—and miserable in soul, and contracted in spirit, must be the one who does not wish it success. Our state has suffered severely from those imposing pedagogues who have robbed us of our most precious rights. Yes, they have covered with the cloak of ignorance those gems, which, were they exposed to the light of science, might have vied in beauty and brilliancy with the productions of any nation; those minds, which now emit but a feeble light, would undoubtedly, had they been properly cultivated, have been among the first stars in the canopy of learning. Shall the extirpation of such wrongs be left entirely to the male sex? If we desire to take an active part in the cause, nothing will tend more to the promotion of it than educating indigent females; they, at the expiration of their tuition, return to the bosom of their family—their friends will exult in their superiority; while they, unconscious of the inferiority of others, will be bright and shining lights to the circles in which they move; as centres of systems, they will keep in constant motion their satellites—their precepts doing

much, and good examples more, for the injured cause of Education.

We presume not to educate statesmen, or send forth in the world great political characters from our society, but confine our feeble means and humble talents to the female part of the community. Ours will not, like the thundering and sublime cataract, attract attention, but as the smooth and gently gliding stream, move within its banks quietly—yet nourish, and by its sweet waters make more beautiful the plants and odoriferous flowers, which decorate its shores.

Benevolence needs no adjective to promote its cause. Child of the Almighty God, *He* will supply bountifully a reservoir to yield it sustenance. M. B.

MR. HOLBROOK:

Dear Sir—This address was written by one of the little girls you examined, when you favored us with a visit. I have sent it, not only because I consider it merits our attention, but because I am sure your spirit of benevolence will rejoice to learn some particulars in relation to the Society to whom it was delivered.

It was formed on my suggesting, that the money spent by pupils at school, might be applied to a purpose better calculated to make them happy; and at the same time I stated to the school, that they spent enough in useless articles to board and educate a poor child, who otherwise might not enjoy the blessings of an education. They caught at this as at the wild fire by which the prophets of old were once enraptured, and soon gathered their funds and classmates, and actually elected officers, and formed a society of forty members. The constitution being adopted, and having for its object the education of a young lady, they presently selected and found a beneficiary. The society has existed some time, and the object of their benevolence is profiting largely by their self-denial; for the young lady they are educating improves very fast, has her board and expences paid for up to the close of this year, and I have no doubt will live to bless her dear classmates, that thus united for her, others and their own happiness *to do good*. Your motto is acted out here, 'accustom children to give, and they will be benevolent.' Yours, truly,

R. C. BROWN.

Scottsboro' Institute.

Lecture on the Moon's Attraction producing Tides, by MISS S. L. *Member of the Scottsboro' Institute, Ga.*

IT is not for us, with our limited understanding, to wish the hand of Deity to expose to our view at once, the whole face of nature; but it is our province to be satisfied to explore step by step each phenomenon of nature, until we have acquired a stock of knowledge sufficient to render us intelligent and intellectual.

One step in ascending the Hill of science, over which we have to climb in order to gain the end we have in view or understanding the science of nature, is the explanation of the TIDES; which is the subject I have to present to you. This diagram represents the Tides. Suppose the earth covered with water, and let the letter M represent the moon, and E the earth, the protuberance of water that we see immediately under the moon, is caused by the attraction of that body which draws the water under it, and forms a full tide, commonly called high water. There is also one at the opposite side, occasioned by the centrifugal force, which is greater at the Equator than at the Poles: it therefore draws the water down to the equator and forms a tide.

The centrifugal force increases always in proportion to the distance it is from the centre of motion.

The sun has not as much effect on the water as the moon; for though it is really more powerful, yet its power is in a great degree lost in the distance. It has some influence on them, for when it acts in conjunction or in a straight line with the moon, as is here represented, the tides are greatly increased, and are called spring tides. When they act in opposition or in contrary directions, the sun weakens the power of the moon, and the smaller or neap tides are formed.

They are greater in the Torrid Zone, than at any other place, because the moon is more vertical there than any where else.

The tides are three quarters of an hour later every day, because as the moon advances in her orbit during our daily revolution, the earth has to make more than a complete revolution to bring the same meridian opposite to the moon—and it takes us three quarters of an hour to overtake her—hence it is that the tides are retarded every day. There are no tides in lakes, because they are so small that when the moon is vertical, every part is attracted alike.

As we have seen the tides rise and fall, we have seen the gay 'meteors of fashion rise and fall.' We have heard of towns reared, and growing in beauty but to fall. We have heard of an Empire flourishing in grandeur and wealth, but to be levelled with the lowest. We have seen the idle pursuing one novelty with eargerness until wearied, when it is forsaken for some other equally trivial. And we have found by experience, that of beauty, grandeur, wealth, and literature, but one is lasting and durable. Let us, therefore, by our improvement in literature and great elevation above the brute creation, prove to those who so much deny human nature, that it does not deserve all the censure and contempt they bestow on it.

S. L.

Scottsboro' Institute,

To the Young Ladies of the Boston Schools.

DESCRIPTION OF SOUTHERN PLANTS,

NO. I.

WITH hearts ever disposed to cultivate the softer and nobler feelings of friendship, we hope that an intercourse between northern and southern schools, will rekindle the flame of affection which has nearly been extinguished by the non-supply of reciprocation from our northern friends, and as a testimony of continued esteem, we offer you a description of some of the plants indigenous to our soil. As children of America, we presume you to take an interest in the welfare of a sister State, and feel gratified when you behold her prosperous and happy. That Georgia is prosperous and happy, is evident from her being the land of 'peace and plenty.' She with her mines of gold can provide wealth, and with the outstreched hands of benevolence relieve the distresses of the indigent. With her metallic earths she arrests the attention of the mineralogist, and with her wild flowers and shrubs, the simplest but prettiest ornaments of her soil, allures the attention of the botanist. As soon as Spring approaches, nature, by her magic touch, unfolds her beauties. The genial heat of the southern sun, causes the young embryo to peep from its hiding place, to expand its leaflets, and as soon as the growth of the plant is sufficiently perfected, the calyx formed, unfolds the flower. It is about the first of May, we witness this operation in the Calycanthus Floridus, or sweet shrub peculiar only to warm climates.

It belongs to the Class Polyandria, Order Monogynia.

Calyx leafed, pitcher-shaped, scaly, with colored petal-like divisions. Corol O. styles many, with glandular stigmas. Seeds numerous in a succulent calyx. Divisions of calyx lanecolate. Leaves broad, oval, acute, tormentose beneath. Branches spreading. Bark very aromatic. This, no doubt, protects it from the attack of insects. It grows to the height of from three to seven feet, and is found mostly in damp soils along the banks of small streams. It flourishes remarkably well in gardens. The size and odor of the flowers are thought by many to be improved by cultivation.

Medicinal properties. It is a refrigerant, and possesses astringent properties. It is more distinguished for its odoriferous, than medicinal qualities. The odor of its flowers causes it to be much valued by the fair sex. Its fragrance is very similar to that of the pine-apple, and while the inhabitants of the torrid zone can sip the nectarine sweetness of that delicious fruit, we can quaff the refreshing, grateful odors of the Calycanthus. Knowing that we have many native plants that would, by their beauty, charm the eye of a young florist, delight and please the scientific botanist, we would propose to the Young Ladies of the Boston Schools an interchange of plants, minerals, &c. accompanied by descriptions, thinking it will not only contribute to mutual gratification, but improvement. Believing intercourse of this nature to be the soul of improvement, and improvement the beacon to happiness; this alone will urge us 'onward, farther onward.'

M. A. B.

Scottsboro' Institute.

NO. II.

Botanical name, *Gossypium Herbaceum.*
Common name, *Cotton.*

IN this section of country, latitude 33 N, the cotton plant grows to the height of 3 or 4 feet. The seeds are usually planted from the middle to the end of March. The land should lie well broken—the mode of culture is similar to that of turnips, corn, &c. In laying out the rows for planting, it is deemed best to raise them with a suitable instrument, so as to elevate the centre of each row—leaving a water furrow between each.—A small trench is then opened in the centre of each ridge, in which the seeds are sown in double the quantity intended to remain for maturity.—For the covering of these seeds various modes have been invented—but the object of all is to cover them lightly with well pulverized soil, never deeper than two inches.—The rows are from 3 to 6 feet apart according to the quality of the soil, if 6 feet the land should be very rich. When the seeds are planted, if the soil be moist, it has been found best to put them in water previous to planting and let them remain until they are considerably swollen—then sprinkle a little ashes or sand over them, place them in the ground, and cover them as before pointed out. If the moisture be sufficient, and the temperature of the atmosphere be favorable to vegetation, the seeds will germinate, and the plant spring up in a very few days, and give the whole field a lively green appearance. It is not very uncommon for a partial dearth to take place with this very tender plant, especially when it stands very thick. The thinning of cotton may be done safely, when small fibrous roots are discovered, putting out in every direction from the radix or main root. Whether there should be one or two stalks left together is a disputed point, but the judgment of those most successful is, that one is best. It is of infinite importance in the cultivation of cotton, that it should be kept free from weeds or grass, otherwise it will be greatly injured. The land having been well broken and prepared before planting, cotton can receive no benefit from deep working, but sustains an injury. Various instruments have been invented to aid in the cultivation of cotton, many of them may be used to advantage. It is recommended by many that all cotton high or low, or lands rich and poor, be topped in the month of July; it increases the produce and heightens the quality. About the first of August cotton commences opening, the sooner it can be gathered from the field the better, because the longer it remains the more it decreases in weight; it begins to open in September, and continues to open gradually all the fall; it is gathered from the field by the hand.

BOTANICAL DESCRIPTION.

Monadelphia—Polyandria—Linn.: Malvaceal Juss.

GENERIC DESCRIPTION.

Perianth, double exterior one leaved, three cleft, flat, larger interior one leaved, obtusely five ways, emarginate; cap-formed.

Corolla, five coalesced at the base inverse, cordate, flat, expanding.

Stamina, filaments numerous, coalesced below into a cylinder, loose above, inserted into the corolla.

Pistil, germ roundish, style columnar, the length of the stamens, stigmas four.

Capsule, three or four celled, the same number of valves, seed numerous, involved, in greyish cotton like wool.

SPECIFIC DESCRIPTION.

Leaves five lobed, mueronate, one gland beneath the stem, herbaceous, smooth, branching.

The cotton flower usually begins to expand about the middle of June, and continues blooming for several weeks. The flowers are at first of a pale yellow, but soon change to a pink hue; this is probably owing to some chemical effect. After the flower has withered, the pericarp, or that in which the cotton is enclosed, begins to expand—and the cotton, tired of its long confinement, burst its bounds, and escapes as the weary prisoner from his long imprisonment, and presents a striking contrast, the snow white cotton and deep green leaves composing a scene though common, pleasingly beautiful. The anxious plodding farmer admiring his well cultivated fields, is an example of contentment and peace, well worthy of imitation.

The seeds are lobed, of an oval form, and their components of a dark oily nature. They form excellent food for some kinds of cattle, whilst they destroy the life of others, and are considered valuable on account of enriching the land, thus rendering it more productive. The cotton is undoubtedly one of the most useful productions of our country, and should lead us to admire and adore the wisdom and benevolence of that glorious being, who in the cotton plant not only presents us with a beautiful flower to delight the eye, but is also subservient in its culture and manufacture to supplying the wants of thousands, who might otherwise beg for want of employment. It is wrought into the finest and most delicate fabrics; it not only adorns the fairest forms, but is manufactured in a coarser manner into a covering for the lowest and plainest of the human species. Surely gratitude is the least return we can make to HIM, who in the production of this simple plant, has manifested his watchful providence in promoting the happiness of mankind. E. L.

Scottsboro' Institute.

THE RIVER.

River! River! little River!
Bright you sparkle on your way,
O'er the yellow pebbles dancing,
Through the flowers and foliage glancing,
Like a child at play.

River! River! swelling River!
On you rush o'er rough and smooth—
Louder, faster, brawling, leaping,
Over rocks, by rose-bank sweeping
Like impetuous youth.

River! River! brimming River!
Broad and deep and *still* as Time,
Seeming *still*—yet, still in motion,
Tending onward to the ocean,
Just like mortal prime.

River! River! rapid River!
Swifter now you slip away;
Swift and silent as an arrow,
Through a channel dark and narrow,
Like life's closing day.

River! River! headlong River!
Down you dash into the sea;
Sea, that line hath never sounded—
Sea that voyage hath never rounded,
Like eternity.

MOZART.

The accounts of this admirable composer's early proficiency in music are almost incredible. He began the piano at three years of age; his first delight was almost scientific; he used to spend his first hours in looking for thirds, and felt charmed with their harmony. At five years old, he began to invent little pieces of such ingenuity, that his father used to write them down. He was a creature of universal sensibility, a natural enthusiast, from his infancy fond, melancholy, and tearful. When scarcely able to walk, his first question to the friends who took him on their knee was, whether they loved him, and a negative always made him weep. His mind was all alive; and whatever touched it, made it palpitate throughout. When he was taught the rudiments of arithmetic, the walls and tables of his bed-chamber were found covered with figures. But the piano was the grand object of his devotion. At six years old, this singular child commenced with his father and sister (two years older than himself) one of those musical tours common in Germany, and performed at Munich before the Elector, to the great admiration of the most musical court on the continent. His ear now signalized itself by detecting the most minute irregularities in the orchestra; but its refinement was almost a disease: a discord tortured him; he conceived a horror of the trumpet, except as a single accompaniment; and suffered from it so keenly, that his father, to correct what he looked on as the effect of ignorant terror, one day desired a trumpet to be blown in his apartment. The child entreated him not to make the experiment; but the trumpet sounded. Mozart suddenly turned pale, fell on the floor, and was going into convulsions, when the trumpeter was sent out of the room.

When only seven years old he taught himself the violin; and thus, by the united effort of genius and industry, mastered the most difficult of all instruments. From Munich he went to Vienna, Paris, and London. His reception in the British metropolis was such as the curious give to novelty, the scientific to intelligence, and the great to what administers to stately pleasure. He was flattered, honored, and rewarded. Handel had then made the organ popular, and Mozart took the way of popularity. His execution which on the piano had astonished the English musicians, was on the organ, brought in aid of his genius, and he overcame all rivalry. On his departure from England, he gave a farewell concert, of which all the symphonies were composed by himself. This was the career of a child nine years old! With the strengthening of his frame, the acuteness of his ear became less painful; the trumpet had lost its terrors for him at ten years old; and before he had completed that period, he distinguished the dedication of the Church of the Orphans at Vienna by the composition of a mass, motets, and a trumpet duet; and acted as director of the concert. The detail of years is minute; but who will object to reckoning the steps by which genius climbs to fame? Mozart had now traversed the great king-

doms of the earth and seen all that could be shown to him of European wealth and regal grandeur. He had yet to see the kingdom of European genius. Italy was an untried land, and he went at once to its capital. He was present at the Miserere, which seems to have been then performed with an effect unequalled since. The singers had been forbidden to give a copy of the score. Mozart bore it away in his memory, and wrote it down.—This is still quoted among musicians as a miracle of remembrance; but it may be more truly quoted as an evidence of the power which diligence and determination give to the mind. Mozart was not remarkble for memory; what he did all men may do; but the same triumph is to be purchased only by the same exertion. The impression of this day lasted during life; his style was changed; he at once adopted a solemn reverence for Handel, whom he called the 'Thunderbolt,' and softened the fury of his inspiration by the taste of Boccherini. He now made a grand advance in his profession, and composed an opera, 'Mithridates,' which was played twenty nights at Milan.

American Anecdotes.

Boston Wesleyan Lyceum.

Art. I. This association shall be called the Boston Wesleyan Lyceum.

Art. II. The object of the Lyceum shall be the mutual improvement of its members, and the general advancement of education through our church, our country, and the world.

Art. III. Any person of good moral character may be a member of the Lyceum, by subscribing to the Constitution, and paying 50 cents upon entrance, and 12 1-2 cents monthly afterwards. Ladies may be members by paying one-half the sums above named. Children may be members for 12 1-2 cents, at entrance, and one cent a week after entrance. $10 paid at one time, will make a person a member for life. Honorary members may be elected by vote of the Society.

Art. IV. The officers of the Lyceum, to be chosen annually by ballot, shall be a President, three Vice Presidents, a Recording and Corresponding Secretaries, a Treasurer, and five Curators, which officers shall together constitute a Board of Managers.

Art. V. The Curators shall be the Executive Committee, and general agents of the Society; the other officers shall perform the duties usually implied in their several offices.

Art. VI. The annual meetings of the Lyceum, for the appointment of officers and other business, shall be held on the first Wednesday of October, and special meetings at such times as may be designated by the Board of Managers.

Art. VII. The Lyceum may be divided into departments, according to the ages, sex, and secular pursuits of the members, and into classes, according to the subjects which they may cultivate.

Art. VIII. For promoting the special objects of the several departments and classes of the Lyceum, each may have, under the direction of the Board of Managers, the use of the rooms, apparatus, books, and the other collections, at their meetings, besides the privilege of attending the general meetings of the Society.

Art. IX. To promote the object of general education, and Christian benevolence, the Lyceum may appropriate one-fourth of its annual income to other measures than the immediate improvement or use of its members; such as employing agents, aiding Lyceum seminaries, or self-supporting schools, establishing circulating libraries, &c., according to the discretion of the Society.

Art. X. The Board of Managers shall have authority to fill their vacancies, provide for public meetings, appoint agents, give directions to the Curators and other members of the body, and manage the general business of the Society.

Art. XI. The Lyceum may make such By-Laws, agreeably to the Constitution, as it may, from time to time, find expedient.

Art. XII. This Constitution may be altered or amended by a vote of two-thirds of the members present, at any regular meeting, the alteration or amendment having been proposed at a previous meeting.

A. B Snow, *Recording Secretary.*

Boston, July, 18th, 1833.

By-laws of the Boston Wesleyan Lyceum.

Art. I. The general meetings of the Boston Wesleyan Lyceum shall be on the first Wednesdays of every month, at such hours and places as shall be designated by the Board of Managers.

Art. 2. The exercises of the general meetings shall be addresses, dissertations, discussions, reports from the different deparments and classes, presenting or exhibiting specimens of nature, of art, or of the improvement of the members, and such other things as may be designated by the managers; which meetings shall be opened with prayer.

Art. 3. The various departments and classes of the Lyceum, shall have authority to appoint their own officers, committees, &c; and shall receive such aid from the Board of Managers in their different exercises and studies, as may be deemed expedient by them to render; and shall, at all times, be under the cognizance and direction of the Board. It shall be the duty of the several members of the Board to visit the different departments and classes as often as is convenient.

Art. 4. Each department and class shall appoint the times, places and exercises of its own meetings, with the advice and consent of the Board of Managers.

Art. 5. The members of the Lyceum shall each be furnished with a ticket or card, signed by the President and Secretary, containing a certificate of membership; and with a scrip or receipt acknowledging their monthly payments which shall be made to the Treasurer at each monthly meeting. The juvenile members shall make their weekly payments at their weekly meetings, when they hold them; when they do not hold them, they shall make the payments at the monthly meetings the same as the adults.

Art. 6. The Curators of the Lyceum shall provide, as soon as convenient, under the direction of the Manager, a room or rooms for the meetings collections, &c. of the Society.

Art. 7. Whenever the Library of the Lyceum shall become sufficiently large, the managers may divide it into different portions, and deposit them in different parts of the city, to be returned at such times, and under such regulations as they may direct. The articles of apparatus, specimens from the Cabinet, &c. may be used by any department or class of the Lyceum at the rooms of the Society, and, with the consent of the Board of Managers, may be carried to any place in the city which may be for the convenience of the department or class which may need them.

Art. 8. The rooms, library and other collections of the Lyceum shall be under the immediate charge of the Curators by the direction of the Board of Managers. The Curators may divide their duties for this purpose, assigning to each such a distinct and separate service as they may deem expedient.

Art. 9. Each member shall consider it his or her duty to deposit specimens of nature and of art, books, articles of apparatus &c. in the room or rooms of the Lyceum, as he or she may find it convenient.

A record of the donations and of the donors' names, handed to him by the Curators, shall be kept in a book for that purpose by the Secretary. The Curators shall also when necessary carefully label each article belonging to the Lyceum.

Fluidity,

The state of bodies when their parts are very readily moveable in all directions with respect to each other.

Before Dr. Black began to deliver his chemical lectures in Glasgow in 1757, it was universally supposed that solids were converted into liquids by a small addition of heat, after they had been once raised to the melting point, and, that they returned again to the solid state on a very small diminution of the quantity of heat necessary to keep them at that temperature. An attentive view of the phenomena of liquefaction and solidification gradually led this philosopher to observe their inconsistence with the then received opinions, and to form another which he verified by direct experiments, and drew up an account of his theory, and the proofs of it.

The opinion which he formed was, that when a solid body is converted into a liquid, a much greater quantity of heat enters into it than is perceptible immediately after by the thermometer. This great quantity of heat does not make the body apparently warmer, but it must be thrown into it in order to convert it into a liquid; and this great addition of heat is the principal and most immediate cause of the fluidity induced. On the other hand, when a liquid body assumes the form of a solid, a very great quantity of heat leaves it without sensibly diminishing its temperature; and the state of solidity cannot be induced without the abstraction of this great quantity of heat. Or, in other words, whenever a solid is converted into a fluid, it combines with a certain dose of caloric, without any augmentation of its temperature; and it is this dose of caloric which occasions the change of the solid into a fluid. When the fluid is converted again into a solid, the dose of caloric leaves it, without any diminution of its temperature; and it is this abstraction which occasions the change. Thus the combination of a certain dose of caloric with ice causes it to become water, and the abstraction of a certain dose of caloric from water causes it to become ice. Water then is a compound of ice and caloric; and in general all fluids are combinations of the solid, to which they may be converted by the application of cold, and a certain dose of caloric.

American School Agent Society.

The American School Agents' Society, will meet for the election of Officers, and the transaction of other business, at the Teachers' Seminary, Andover, on Monday, the 5th of August, at 1 o'clock, P M.

Milo P. Jewett, *Rec. Sec.*

July, 20, 1833.

METEOROLOGICAL DIARY, JUNE, 1833.

Observations 8 A M—2 and 6 P M.

Dys.	Average.	Thermom'r.		Winds.	Weather.
1	83	80	86 84	NE	Clear.
2	85	82	87 85	SW SE	Clear.
3	84	80	88 85	SW SE	Cy. Rain.
4	85	82	88 86	SW NW SE	Clear.
5	83	82	84 82	NE E	Cy.
6	84	82	86 84	SW SE	Clear.
7	85	81	88 86	SW SE	Clear.
8	87	82	90 88	SW	Clear, hazy.
9	79	84	78 74	SW NW NE	Cy. Rain.
10	75	74	75 76	NE	Heavy rain
11	77	74	80 78	NW NE	Clear
12	80	76	83 82	SW NE SE	Clear.
13	80	77	83 81	SW SE	Clear.
14	82	80	84 82	SW S	Cy.; Thun.
15	82	78	84 83	SW	Clear.
16	84	80	86 85	SW NW SW	Clear
17	84	80	86 85	SW	Cy. Rain.
18	82	80	86 80	SW NW NE	Clear; rain.
19	82	78	84 83	NE SE	Cy.
20	82	80	84 82	SW NE SE	Clear, rain.
21	83	80	84 84	SW SE	Cy.
22	82	81	82 82	SW NE SE	Clear, rain.
23	83	82	84 82	SW SE	Cy.; thund
24	82	80	84 82	SW NW.	Clear.
25	75	72	77 77	NW SE	Clear, cool.
26	77	72	80 78	SW SE	Clear.
27	81	76	84 82	SW SE	Clear.
28	83	78	86 82	SW SE	Clear.
29	85	80	88 86	SW	Clear, rain.
30	81	80	82 81	NW NE	Cy.

Remarks for June.

1 These observations have been taken three times a day, viz. at 8 A M, 2 and 6 P M.

2 Mean of three daily observations for the month, 82°. 3° warmer than May, and 1° warmer than June, 1832. Max. 85° on the 2d, 4th, and 7th, Min. 75° on the 10th and 25th.

3 Ther. Ex. at 8 o'clock, A M, Max. 84° on the 9th, Min. 72° on the 26th and 26th, Mean 79.

4 Ther. Ex. at 2 P M, Max. 90° on the 8th, Min. 75° on the 10th, Mean 84°.

5 Ther. Ex. at 6 P M, Max. 88° on the 8th, Min. 74° on the 9th, Mean 82°.

6 There have been 10 rains this month, 6 accompanied with thunder. On the 9th and 25th, there were sudden changes in the weather, from warm to cool.

7 Winds have been SE 5 days, NE 4, NW 4, and SW 17. The weather has been clear 18 days, cloudy 9, rainy 1, and variable 2.

8 The month has been warm, and the atmosphere pure from frequent thunder. The health of the city good for the season. Yours, W. H. W.

Chatham Academy, Savannah, Ga. July 6th, 1833.

Correspondence of Schools.

We cannot well express our obligation to our valued correspondents connected with the Scottsboro' Institute. It is three fold at least. We are obliged to the authors of these several communications, for the instruction and amusement we received in perusing them, for the entertainment they must afford to our numerous readers, and for the example they set for other schools to go and do likewise.

It is indeed most encouraging and animating to witness the progress that has been made towards a general system of correspondence and cooperation among schools in the most distant parts of our country. The progress already made, will render it easy to make further advancements, until all the schools in our nation shall engage in this national enterprize.

Systematic Benevolence.

We refer our readers to the address before the Benevolent Society of the Scottsboro' Institute, for an example worthy of imitation in every school and every family in our land. For although this society of young ladies, and especially the member who addressed them, have set a worthy example, they have done nothing more than Christianity requires. And every school which does not take a course equally worthy, cannot regard themselves, or be regarded by others, as coming up to the spirit of Christian Benovolence.

As the subject of Systematic Benevolence in schools has occupied many of our thoughts, and some portion of our paper, it is truly gratifying to be able to report such progress, and to present such examples as an encouragement to others.

And who can doubt the personal benefit of such an arrangement for every school and every individual who may adopt it?—Can any one doubt that these young ladies receive much greater personal satisfaction from the appropriation they now make of their pence and shillings to the expansive and expantling object of Benevolence, than when they were applied exclusively to themselves? Whoever doubts it, cannot have our admiration either for his intellect or heart.

National Cabinet.

There is no way in which the American Lyceum can so speedily or so completely accomplish the object of procuring a national cabinet of Natural History, and a cabinet in every town and village in the nation, as by the agency of schools. Let all schools follow the example of the Scottsboro' Institute, and every pupil the examples of Misses M. A. B. and L., and this great national object would be effected at once.

The course adopted by the young ladies of several of the schools in Georgia, is quite to the purpose. The descriptions of plants by the members of the Scottsboro' Institute, bear no marks of novices in the field of science. The account of the 'sweet shrub' by Miss M. A. B., cannot fail to bring some fragrance to the more sterile hills of New England; and must certainly find some hearts too warm to be chilled by our frosty winters.

We are particularly gratified to perceive the agriculturist no less than the botanist in these young laborers in the field of usefulness as well as of science. We have never been able to perceive why a science should be neglected because it is useful; or because we are dependent upon it for our food or clothing. And as agriculture is a science no less than an art, and as all the operations of the farmer are founded upon the great and eternal principles of nature, we hope and believe the time is near, when a knowledge of those principles will be an essential part of the education of every accomplished lady, no less than of gentlemen.

We think the description of the cotton plant by Miss E. L., no less complete than it is correct and beautiful.

The moon's attraction, though well illustrated by Miss S. L., we are sure is less powerful, and certainly of a kind far inferior to that which binds hearts, and holds a moral universe together. And while the young ladies at the south and at the north, can each examine and admire the power which causes the tides to ebb and flow, and the moon and planets to revolve, we are convinced that they may understand still better and admire still more, the power which warms and unites hearts, and holds states and Republics together, by a cord which no revolutions can break.

New Books by Old Authors.

Mr. Sullivan, author of the 'Political Class Book,' has prepared a 'Historical Class Book;' Mr. B. D. Emerson of the 'National Spelling Book,' has given to schools a 'New National Spelling Book;' Mr. W. C. Woodbridge of the Geography, has prepared an 'Outline Atlas'; and Peter Parley has entered upon the exact sciences and produced an Arithmetic. More of these works in our next.

Goniometer.

The instrument for measuring the angles of crystals is called a goniometer, of which there are two kinds. 1. The goniometer of M. Carangeau, used by M. Haüy, consists of two parallel blades, jointed like those of scissars, and capable of being applied to a graduated semicircular sector, which gives the angle to which the joint is opened, in consequence of the previous apposition of the two blades to the angle of the crystal. 2. The reflective goniometer of Dr. Wollaston; an admirable invention, which measures the angles of the minutest possible crystals with the utmost precision. To these we may add another invented by Dr. Brewster, and described in the Edinburgh Encyclopædia, Vol. 10. It is much the same as that of Dr. Wollaston, but differs in the application of the principle of construction, and is capable of measuring a hollow angle.

Dragon-tree of Orotava.—One of the most remarkable objects in this place is the dragon-tree, about 60 feet high, with a circumference of 48 feet near the roots. The trunk divides into a great number of branches, which rise in the form of a candelabrum, and are terminated by tufts of leaves. As the species is of very slow growth, the age of this individual must be great.

BOTANY.

COFFEE.

THIS genus of plants contains ten species, chiefly natives of the East Indies, South America, and the Polynesian isles. The only species, however, that we here notice in the present work is the Coffee Arabica, of which there are two varieties, though both are sold in our shops as Turkey coffee, and possess similar qualities.

a. With leaves oblong-ovate; flowers in axillary clusters; corols five-cleft.

c. With berries oblong, acute at the base; leaves opposite and waved; flowers from two to four together, nearly sessile, white, odorous.

The tree seldom rises more than 16 to 18 feet high, with an erect main stem, covered with a lightish brown bark: the leaves are oblong-ovate, pointed; flowers in axillary clusters, the corols of which are five-cleft. These flowers are of a pure white, and very pleasant odor, but their duration is very transient. The fruit resembles a cherry, and grows in clusters, ranged along the branches under the axillæ of the leaves, which are of a laurel leaf. It is an evergreen, and makes a beautiful appearance at every season in the stove, but particularly when it is in flower. The coffee-tree is now propagated in great plenty in many parts of America; but the produce of these countries is greatly inferior to that of Arabia. This plant is propagated by seeds, which should be sown soon after they are gathered from the tree, for if kept but a short time out of the ground, they will not grow, which is the chief reason that this tree has not been spread into more different countries; for the seeds will not keep long enough to be sent; so that in order to cultivate this plant in any part of the world, it is absolutely necessary to have it carried thither growing. The berries are commonly ripe with us in April, at which time they should be sown in pots of fresh light earth, covering them about half an inch thick with the same light earth; then plunge the pots into a moderate hot-bed of tanner's bark, observing to refresh them often with water, as also to raise the glasses in the heat of the day, to admit fresh air; and in very hot weather, it will be proper to shade the glasses with mats, otherwise the earth in the pots will dry too fast, and prevent the vegetation of the seeds. It must be observed that the taking off the pulp of the berries, which has been by some people directed as absolutely necessary, is a great mistake. When this plant is removed, great care should be taken not to break or injure the roots; and also to preserve the earth to the roots; nor should they be kept any time out of the ground, for if their fibres be suffered to dry, they are very subject to mould, and perish soon after. The soil in which this tree has been observed to thrive best was composed in the following manner, viz. one load of fresh, light, loamy earth; one load of rotten cow-dung, with half a load of sea-sand; these were well mixed together, and laid in a heap six months before it was used, in which space of time it was turned several times, the better to incorporate the several parts.

The coffee-tree has of late years been much cultivated in the islands of America, both by the English and French, but the coffee which has been thence brought to Europe has been very little esteemed. This great difference in the goodness many have attributed to the soil in which it grows, and therefore have supposed it impossible for the inhabitants of the British islands ever to cultivate this commodity to any real advantage; but this is certainly a mistake, as is affirmed by several persons of credit, who have resided in England, who say, that the berries which they have gathered from the trees and roasted themselves, were as well flavored as any of the coffee brought from Mocha; so that the fault is in the drying, and bringing over: for if in the drying of the berries they be laid in rooms near the sugar-works, or near the house where the rum is distilled, the berries will soon imbibe the surrounding effluvia, which will greatly alter their flavor. In like manner the coffee brought in the same ships with rum and sugar, were the coffee ever so good, would hereby be entirely altered.

With respect to the medicinal properties of coffee, it is in general excitant and stimulating; though we doubt whether it relaxes the animal fibres, as has by some authors been supposed. Its more or less wholesome effect greatly depends on the climate, as well as the age, constitution, and other peculiarities, of the individual. Hence it cannot be recommended to children, or persons of a hot, cholic, nervous, or phthisical habit; nor will it be so safe and useful in warm as in cold and temperate climates; but to the phlegmatic and sedentary, a cup of coffee, one or two hours after a meal, or which is still better, one hour before it, may be of service to promote digestion, and prevent or remove a propensity to sleep. In cases of spasmodic asthma, hypochondriasis, scrofula, diarrœa, agues, and particularly against narcotic poisons, such as opium, hemlock, &c. coffee often produces the best effects; nor is there a domestic remedy better adapted to relieve periodical head-aches which proceed from want of tone, or from debility of the stomach.

Count Rumford, in the eighteenth of his Essays, has entered into a minute, elaborate, and useful analysis of the powers of this valuable berry, and the best means of infusing it for dietic purposes. He remarks that 'among the numerous luxuries of the table, unknown to our forefathers, coffee may be considered as one of the most valuable. Its taste is very agreeable, and its flavor uncommonly so; but its principal excellence depends on its salubrity, and on its exhilirating quality. It excites cheerfulness, without intoxication; and the pleasing flow of spirits which it occasions, lasts many hours, and is never followed by sadness, languor, or debility. It diffuses over the whole frame a glow of health, and sense of ease and well-being, which is extremely delightful; existence is felt to be a positive enjoyment, and the mental powers are awakened, and rendered uncommonly active.' After some other judicious observations on the valuable properties of coffee, and the uncertainty of the result in the common methods of preparing it, the Count proceeds with his subject.

'Different methods have been employed in making coffee; but the preparation of the grain is nearly the same in all of them. It is first roasted in an iron pan, or in a hollow cylinder made of sheet-iron, over a brisk fire; and when, from the color of the grain, and the peculiar fragrance which it acquires in this process, it is judged to be sufficiently roasted, it is taken from the fire, and suffered to cool. When cold it is pounded in a mortar, or ground in a hand-mill to a coarse powder, and preserved for use.

'Great care must be taken in roasting coffee, not to roast it too much: as soon as it has acquired a cinnamon color, it should be taken from the fire, and cooled; otherwise much of its aromatic flavor will be dissipated, and its taste will become disagreeably bitter.

'In some parts of Italy, coffee is roasted in a thin Florence flask, slightly closed by means of a loose cork. This is held over a clear fire of burning coals, and continually agitated. As no visible vapor ever makes its appearance within the flask, the color of the coffee may be distinctly seen through the glass, and the proper moment seized for removing the coffee from the fire.

'I have endeavored to improve this Italian method, by using a thin globular glass vessel with a long narrow cylindrical neck. This globular vessel is six inches in diameter, and its cylindrical neck is one inch in diameter, and eighteen inches long. It is laid down horizontally, and supported in such a manner on a wooden stand as to be easily turned round its axis. The globular vessel projects beyond the stand, and is placed, at a proper height, immediately over a chafing-dish of live coals. When this globular vessel is blown sufficiently thin, and when care is taken to keep it constantly turning round when it is over the fire, there is not the smallest danger of its being injured by the heat, however near it may be to the burning coals.

'In order that coffee may be perfectly good, and very high flavored, not more than half a pound of the grain should be roasted at once; for, when the quantity is greater, it becomes impossible to regulate the heat in such a manner as to be quite certain of a good result.

'The end of the cylindrical neck of the globular vessel should be closed by a fit cork, having a small slit in one side of it, to permit the escape of the vapor out of the vessel. This cork should project about an inch beyond the extremity of the neck of the vessel, in order that it may be used as a handle in turning the vessel round its axis, towards the end of the process, when the neck of the vessel becomes very hot. The progress of the operation, and the moment most proper to put an end to it, may be judged and determined with great certainty, not only by the changes which take place in the color of the grain, but also by the peculiar fragrance, which will first begin to be diffused by it when it is nearly roasted enough. This fragrance is certainly owing to the escape of a volatile, aromatic substance, which did not originally exist, *as such*, in the grain, but which is formed in the process of roasting it. By keeping the neck of the globular vessel cold, by means of wet cloths, I found means to condense this aromatic substance, together with a large portion of aqueous vapor with which it was mixed.

'The liquor which resulted from this condensation, which had an acid taste, was very high flavored, and as colorless as the purest water; but it stained the skin of a deep yellow color, which could not be removed by washing with soap and water; and this stain retained a strong smell of coffee several days.

'I have made several unsuccessful attempts to preserve the fragrant aromatic matter which escapes from the coffee when it is roasting, by transferring it to other substances. Perhaps others may be more fortunate. But I must not suffer myself to be enticed away from my subject by these interesting speculations.

'If the coffee in powder is not well defended from the air, it soon loses its flavor, and becomes of little value; and the liquor is never in so high perfection as when the coffee is made immediately after the grain has been roasted.

'This is a fact well known to those who are accustomed to drinking coffee, in countries where the use of it is not controuled by the laws; and if a government is seriously disposed to encourage the general use of coffee, individuals must be permitted to roast it in their own houses.

'As the roasting and grinding of coffee take up some considerable time, and cannot always be done without inconvenience at the moment when the coffee is wanted; I contrived a box for keeping the ground coffee, which I have found by several years' experience, to preserve the coffee much better than any of the vessels commonly used for that purpose. It is a cylindrical box made of strong tin, four inches and a quarter in diameter, and five inches in height, formed as accurately as possible within, to which a piston is so adapted as to close it very exactly; and when pressed down into it, to remain in the place where it is left, without being in danger of being pushed upwards by the elasticity of the ground coffee which it is destined to confine.

'This piston is composed of a circular plate of very stout tin, which is soldered to the lower part of an elastic hoop of tin, about two inches wide, which is made to fit into the cylindrical box as exactly as possible, and so as not be moved up and down in it without employing a considerable force. This hoop is rendered elastic, by means of a number of vertical slits made in the sides of it.

'On the upper side of the circular plate of tin, which closes this hoop below, and in the centre of it, there is fixed a strong ring, of about one inch in diameter, which serves instead of a piston rod, or a handle for the piston. The cylindrical box is closed above by a cover, which is fitted to it with care, in order that the air which is shut up within the box (between the piston and the cover) might be well confined.'

[*Gallery of Nature and Art.*

AMERICAN INSTITUTE OF INSTRUCTION.

THE Annual Meeting of the Institute will be held at the Representatives' Hall in Boston, on Thursday, the 22d of August next, at 9 o'clock, A. M., and the session will continue until the 27th.

On the first day of the session the choice of officers will take place; the Introductory Address will be delivered by WM. SULLIVAN, of Boston; and a lecture on 'the Education and Qualifications of Teachers,' by S. R. HALL, of Andover, Mass. A public discussion will then be held on 'the relative importance of the developement of the faculties, and the acquisition of knowledge, as objects of Elementary Education.'

On Friday, lectures will be delivered on '*Emulation* as a motive to exertion in Schools,' by Rev. LEONARD WITHINGTON, of Newbury, Ms.; 'on *Primary Education*,' by Rev. GARDINER B. PERRY, of Bradford, Mass., and 'on *Mental Philosophy* applied to instruction,' by A. A. BAKER, of Andover, Mass.:—and a discussion will take place on the importance of *Phrenology* to a teacher.

On Saturday, lectures will be delivered on 'the best methods of *Discipline* for the young,' by Rev. John H. Hopkins, Bishop of Vermont; on 'the Importance of *Natural History*, and the modes of pursuing study,' by Dr. J. B Flint of Boston; and on 'the importance, to parents and teachers, of a knowledge of *Human Physiology*' by Dr. E. Reynolds, of Boston. A discussion will take place on the question—'How may the evils of too long *confinement* to the school-room be prevented?'

On Monday, the 26th, lectures will be delivered on 'the *Method of Jacotot*,' by George W Greene, of East Greenwich, R. I.; on 'the best method of teaching the *Ancient Languages*,' by Prof. Alpheus S. Packard, of Bowdoin College, Maine; on 'the Importance of a Knowledge of *Ancient Art*, to those engaged in the higher departments of Classical Instruction,' H. R. Cleaveland, of Boston, and on 'the best modes of teaching *Geography*,' by W. C. Woodbridge, of Boston. A discussion will take place on the expediency of *Bodily Punishment* in Schools.

On Tuesday, lectures will be delivered on 'the mode of teaching *Elocution*,' by Dr. Jonathan Barber, of Cambridge, Mass.; on 'the best mode of teaching *Natural Philosophy*,' by Prof. B. Hale, of Dartmouth College, Hanover, N. H.; and on 'the danger of unsafe or useless *Innovation*, and the indication of any present tendency to this evil in our country,' by E. A. Andrews, late of New Haven, Conn., now of Boston. The question will then be discussed,—'In what way can the American Institute of Instruction do most to advance the cause of Education.'

A lecture will be delivered at such time as may be found most convenient, on 'the *new mode* of teaching *music*, compared with the old,' by Lowell Mason, professor in the Boston Academy of Music.

The following subjects for discussion have also been selected by the Directors, and may be called up, at any time during the session not otherwise occupied; viz.

The proper *combination* of *oral* and experimental *instruction* and lessons from *text-books*; and the advantages that have been experienced from the different modes in use;

The expediency of awarding *medals*;

The introduction of *manual labor schools*; and

The practicability of having a board of literary gentlemen, not members of the school committee, to conduct examinations in schools.

Such are the preparations made for this meeting of the Institute.

The panic which prevailed last year in relation to the cholera prevented many persons who otherwise would have been present, from attending the meeting, thus making the audience and the number of lectures delivered, smaller than usual.

Happily no cause of present apprehension exists, and the attendance may be expected to be greater than common, from the disappointment of last year.

The causes which led to the formation of the Institute,—the necessity of advancing the profession of the teacher, by introducing a higher standard and requiring a more complete preparation among its members, and by rendering apparent to the community the great value of thoroughly educated teachers, the desirableness of giving teachers an opportunity of becoming acquainted with each other, and freely communicating new views and modes of instruction as they are introduced,—the advantages of a liberal discussion of various systems, and the accumulation of facts from numerous independent observers, and the thence consequent improvement in the objects, the course, and the means of instruction, and in the qualifications, character and activity of teachers, these causes still exist. They act and will continue to act, with unabated energy.

Much has certainly been done towards accomplishing the objects of the Institute. The Society itself has unquestionably done much. The necessity of full preparation for the business of teaching is every day more apparent and more generally acknowledged. Young men of talents are looking forward to it, with predilection, as their profession. Departments for the special preparation of teachers are contemplated in several colleges, and in some already established.

The advantages and satisfaction of mutual acquaintance among teachers from various parts of the country have been felt. The utility of the Institute is recognized in the existence of the numerous societies with similar objects, which have been formed since its organization.

Much yet remains to be done; and in what way can the objects of the Institute be better accomplished than by the active and intelligent co-operation of teachers and the friends of education? How can they become acquainted with each other and be made to perceive the excellencies or deficiencies of systems and methods, but by personal conference, by meeting, and bringing together the conclusions of observations and experience,—by feeling and communicating the sympathy of common wants and common pursuits?

To all interested in education, especially to members of school committees, and to those already entered or about to enter into the work of instruction, the meeting of the institute presents an occasion which ought, not, without urgent necessity, to be neglected.

By order of the Committee of Arrangements,

C. DURGIN, *Recording Secretary.*

Boston, July 19th, 1833.

Editors of papers throughout the country interested in the cause of education, are requested to copy this notice.

QUESTIONS

ON THE LAST NUMBER OF THE LYCEUM.

Is it known from what the horse originated?

How does the European horse differ from that animal in Asia?

By which of the senses can the air be perceived, sight or touch?

What is wind?

In what state is air most perceptible and most powerful in its results?

In what state except solid are bodies found?

How much more dense is water than air?

How much more dense is gold than air?

What are the materials used in making India ink?

How is red ink made? also blue and yellow?

At what time and by whom was golden ink used?

What are the materials in printers' ink?

For what purposes are sympathetic inks used, and how formed?

How can ink stains be removed from paper and cloth.

How many volumes of Harper's Family Library have been published and what are some of the subjects?

From what source, and by what means was salt first furnished to Ohio and other western states?

Is the water now used for making salt in the Western Valley, stronger or weaker than that used thirty years ago?